

## REMARKS

### Rejections under §112, first and second paragraphs

The skilled worker would understand that the term “complement” in the claims referred to polynucleotides which possess 100% complementarity to the recited sequence. See, also, Specification, Page 11, line 9. Nonetheless, the claims have been amended by replacing the term “complement” with “complete complement.” This amendment does not change the scope of the claims since the skilled worker would have reasonably construed the original term (“complement”) in the claims to have the same scope as the substituted phrase (“complete complement”).

A search of the of the PTO patent database revealed 2340 DNA patents which used the term “complement thereto” in the claims, and only 32 patents which recited the examiner’s preference “complete complement thereto.” See, Exhibit 1. Many of these patents refer to a sequence identification number (“SEQ ID NO”), and then to the **complement** of it. It is not logical that the claimed complement would be broader than the sequence associated with its identifier, and therefore, it is evident that the term “complement” as utilized in over 98% of the patents in Exhibit 1 is understood to mean “complete complement,” making the amendment unnecessary.

Applicant has amended Claim 2 to recite specific hybridization conditions. Support for this amendment can be found in the specification, e.g., Page 8, lines 22-27. This claim type has been determined by the Patent Office to meet the requirements of §112, first paragraph. See, Example 9 of the Written Description Guidelines. For example, it is stated on Page 36 of the Guidelines: “Now turning to the genus analysis, a person of skill in the art would not expect substantial variations among species encompassed with the scope of the claims because the highly stringent hybridization conditions set forth in the claim yield structurally similar DNAs.

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Reply to Office Action of, February 23, 2004

Thus, a representative number of species is disclosed, since highly stringent hybridization conditions in combination with coding function of DNA and the level of skill and knowledge in the art are adequate to determine that applicant was in possession of the claimed invention.”

Claim 2 has also been amended to expressly recite “wherein said polynucleotide codes for a polypeptide that has H2 receptor activity.” Support for this amendment can be found throughout the specification, e.g., on Page 1, line 29-Page 2, line 8; Page 3, lines 10-23.

The phrase “specific fragments” would be understood by the skilled worker, especially when read in light of the specification. The claim has been amended to clarify it. Support for this amendment is found in the specification, e.g., on Page 11, line 22-Page 12, line 14; and Page 17, lines 1-30. This amendment does not change the scope of the claim in any way, but merely conforms the claim to the description of “specific fragments” as already defined in the specification.

### **Rejection under §102**

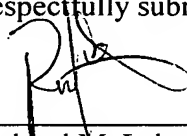
The sequence identified in U.S. Pat. No. 5,994,506 is a human histamine H2 receptor having 359 amino acids. See, the ‘506 Patent, Fig. 2A3 and SEQ ID NO:13. As discussed fully in the specification: “It has now been found that the H2R receptors as previously identified were incomplete, lacking a substantial portion of the C-terminus that projects into the cell cytoplasm. Despite years of intensive research on this medically important receptor, this deficiency went unnoticed. Strikingly, the human form of this novel H2 receptor codes for a 422 amino acid polypeptide, 63 more amino acids than present in the previously known form.” The polynucleotide of this previously known form does not have 95% or more sequence identity **along the entire length** of the polynucleotide sequence set forth in SEQ ID NO:1. Sequence Comparison A attached to the Office action indicated it was only 84.6% matching. Moreover, there is no disclosure cited in the Office action of the polynucleotides of claims 3, 4, or 5. Consequently, the rejection should be withdrawn.

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In view of the above remarks, favorable reconsideration is courteously requested. If there are any remaining issues which could be expedited by a telephone conference, the Examiner is courteously invited to telephone counsel at the number indicated below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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Attorney Docket No.: ORIGEN-0017

**Date: May 6, 2004**

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ACLM/"complement thereto" AND DNA: 2340 patents.  
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PAT. NO.	Title
1 <a href="#">6,720,477</a>	<a href="#">Signal transduction stress-related proteins and methods of use in plants</a>
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10 <a href="#">6,716,604</a>	<a href="#">Nucleic acid molecules encoding a subunit of a human calcium/calmodulin-dependent protein kinase</a>
11 <a href="#">6,716,576</a>	<a href="#">Method of assaying Neutrokin-<math>\alpha</math> mRNA level</a>
12 <a href="#">6,716,575</a>	<a href="#">Diagnosis and treatment of AUR1 and/or AUR2 related disorders</a>
13 <a href="#">6,716,432</a>	<a href="#">Pneumolysin mutants and pneumococcal vaccines made therefrom</a>
14 <a href="#">RE38,490</a>	<a href="#">Method for identifying metastatic sequences</a>
15 <a href="#">6,713,666</a>	<a href="#">Invertase inhibitors and methods of use</a>
16 <a href="#">6,713,606</a>	<a href="#">Conjugates of soluble peptidic compounds with membrane-binding agents</a>
17 <a href="#">6,713,259</a>	<a href="#">Corn event MON810 and compositions and methods for detection thereof</a>
18 <a href="#">6,713,066</a>	<a href="#">Production of attenuated respiratory syncytial virus vaccines involving modification of M2 ORF2</a>

- 19 [6,710,229](#) **T** [Cell cycle stress-related proteins and methods of use in plants](#)
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- 21 [6,710,027](#) **T** [Bacillus thuringiensis toxins and genes for controlling coleopteran pests](#)
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- 24 [6,709,838](#) **T** [Nucleic acid encoding patched-2](#)
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- 29 [6,706,509](#) **T** [Oncoprotein protein kinase](#)
- 30 [6,706,491](#) **T** [Reagents and methods for identifying and modulating expression of genes regulated by p21](#)
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- 39 [6,703,220](#) **T** [Human neurogenin 3-encoding nucleotide sequences](#)
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- 41 [6,699,704](#) **T** [Heat tolerant phytases](#)
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- 48 [6,696,293](#) **T** [Process for producing carotenoids and biological materials useful therefor](#)
- 49 [6,696,292](#) **T** [Genes encoding sulfate assimilation proteins](#)
- 50 [6,696,256](#) **T** [Method, array and kit for detecting activated transcription factors by hybridization array](#)

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**ACLM/"complete complement thereto" AND DNA: 32 patents.**












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ACLM/"complete complement thereto" AND DNA

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4 <a href="#">6,686,185</a>	<a href="#">T 25934, a novel fatty acid desaturase and uses therefor</a>
5 <a href="#">6,682,888</a>	<a href="#">T Genes expressed in alzheimer's disease</a>
6 <a href="#">6,680,191</a>	<a href="#">T Isolated nucleic acid molecules coding for tumor rejection antigen precursors of members of the MAGE-C and MAGE-B FAMILIES and uses thereof</a>
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8 <a href="#">6,632,934</a>	<a href="#">T MORC gene compositions and methods of use</a>
9 <a href="#">6,623,937</a>	<a href="#">T Programmed cell death antagonist protein</a>
10 <a href="#">6,620,922</a>	<a href="#">T Compositions and methods for the therapy and diagnosis of prostate cancer</a>
11 <a href="#">6,590,089</a>	<a href="#">T RVP-1 variant differentially expressed in Crohn's disease</a>
12 <a href="#">6,569,657</a>	<a href="#">T 32140, a novel human aldehyde dehydrogenase and uses therefor</a>
13 <a href="#">6,541,236</a>	<a href="#">T Protein having glutaminase activity and gene encoding the same</a>
14 <a href="#">6,531,280</a>	<a href="#">T Method for identifying or isolating a molecule and molecules identified thereby</a>
15 <a href="#">6,518,411</a>	<a href="#">T RGS compositions and therapeutic and diagnostic uses therefor</a>
16 <a href="#">6,509,155</a>	<a href="#">T Nucleic acids encoding GTPase activating proteins</a>
17 <a href="#">6,503,700</a>	<a href="#">T Mammalian CDP-diacylglycerol synthase</a>
18 <a href="#">6,500,942</a>	<a href="#">T Rin2, a novel inhibitor of Ras-mediated signaling</a>
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20 <a href="#">6,479,263</a>	<a href="#">T Method for detection of micrometastatic prostate cancer</a>
21 <a href="#">6,476,212</a>	<a href="#">T Polynucleotides and polypeptides derived from corn ear</a>

- 22 [6,455,292](#)  [Full-length serine protein kinase in brain and pancreas](#)
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